AT03 Gamification Document

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PRE-PRODUCTION

**Game Genre Analysis**

**Simulation**

**Core Mechanics:** Simulation games often revolve around intricate systems and mechanics that mirror real-world processes. These mechanics include:

1. **Resource Management:** Players must allocate and manage resources efficiently to achieve specific goals or outcomes within the simulation.
2. **Sandbox Environment:** Simulation games frequently provide open-world or sandbox environments where players have the freedom to experiment and make choices that impact the simulated world.
3. **Decision-Making:** Complex decision-making is a central mechanic, requiring players to strategize and plan their actions to achieve success.

**Gameplay Elements:** Simulation games incorporate various gameplay elements that contribute to their immersive nature:

1. **Realism:** Simulation games aim for realism, often replicating real-world scenarios, environments, and mechanics to create an authentic experience.
2. **Progression:** Players advance by achieving goals, completing tasks, and improving their simulated entities (cities, characters, etc.).
3. **Customization:** Many simulation games offer extensive customization options, allowing players to personalize their experience and tailor the simulation to their preferences.

**Player Objectives:** Player objectives in simulation games are diverse and often reflect real-world aspirations:

1. **Creation and Building:** Players might be tasked with constructing and managing cities, theme parks, or civilizations, fostering a sense of accomplishment as their creations thrive.
2. **Economic Success:** Simulation games frequently involve economic simulations, challenging players to generate profits, manage budgets, and make financially sound decisions.
3. **Problem Solving:** Players engage in critical thinking and problem-solving as they address challenges and obstacles within the simulation.

**Target Demographic**

The primary target audience for this application includes potential property buyers who are interested in remote properties, such as vacation homes or investment opportunities. They seek detailed information about the property and its surroundings before making a purchase decision.

also most likely aged 21 to 60 and an equal split of males and females, because it is unlikely that a minor would be looking to buy property.

**Consumer Habits**

Consumer habits may include Research-Oriented Behavior, Preference for Visual Content, Desire for Convenience, Need for Information, Interest in Interactive Experiences, Preference for Personalization, Concern for Sustainability and Interest in Future Potential.

**Game Design Principles and Gameplay Strategies**

**Objectives.** The idea that there needs to be a goal for the player to work towards.

**I can implement this by adding a checklist of tasks that need to be completed, this list could include locations to visit and objects to interact with.**

**Constraints.** The idea that the player needs limits on what that can do.

**I can implement this by limiting the player’s movement in the environment by removing jumping and making it so the player can only move by teleporting between waypoints placed around the environment.**

**Focal Point.** Having a focal point is the idea of never having the player guess where they must go or what they must do. You can implement this principle by adding markers, waypoints or build the map in such a way that it draws the player’s eyes to the objective.

**I can implement this by adding bright waypoints that will let the player know where to go.**

**Sound.** Sound is the idea of asking the question, what sound does that make? Is the sound appropriate? Is the sound necessary? Does it benefit the experience or hinder it?

**I can implement this by adding calm music that fits the scene and appropriate sound effects for interaction.**

**Version Control and Project Management**

Git Hub is the software I will use to conduct appropriate version control throughout the project. It will be used to save different versions of the project and any relating files and make them accessible from any computer.

<https://github.com/mooza99088/2024_IntroductionToGameDesign_AT03>

I will be managing my project tasks and schedule in a word document. This document will contain a schedule to keep me on track throughout the project and a list of all tasks that need to be completed.

**Asset Implementation**

**SPRITES**

**PNG** is an image file type and uses lossless compression, they can be used for transparent textures, sprites and UI elements, issues include larger file sizes.

**JPG** is an Image file type and uses lossy compression, they are suitable for textures and background images. Issues include quality loss and no transparency.

**AUDIO**

**WAV** is an audio type file that is uncompressed, it can be used for High-quality sound effects and voice recordings, issues are that they can have large file sizes and high memory usage.

**MP3** is an audio file type that uses lossy compression, it can be used for music, voice recordings and ambient sounds, the issues include quality loss, licensing issues and it’s not ideal for high-fidelity effects.

**3D MODELS**

**FBX** is a 3D model file type that can contain models, animations and textures, they can be used for Character models and animated objects, Issues may include large file sizes and import issues.

.**BLEND** is the native file type in Blender, it can contain 3D models, animations and scenes. It is used for Blender-created assets, issues are that they can be quite large and there is potential data loss.

Based off my findings I will be using PNG files for sprites and UI elements, WAV files for my sound’s effects and music and FBX files for models.

**Monitoring Progress**

In order to effectively monitor progress throughout the duration of the project I will do weekly reviews to make sure I am on schedule, I will also maintain agile project management tools break down tasks to visualize progress and manage workload.

**Game Engine Evaluation**

**Unity**

|  |  |
| --- | --- |
| Pros | Cons |
| Free to use | New licensing policies |
| Can import unity packages | Does not have built in templates |
| Uses C# as native programming language |  |
| Has all tools needed to make a 3D game |  |
| Capabilities for realistic graphics |  |
| Clean and easy to learn interface |  |

**Unreal Engine**

|  |  |
| --- | --- |
| Pros | Cons |
| Free to use | Cannot import unity packages |
| Full toolset for making 3D games | Uses C++ as native coding language |
| Advanced Lighting and graphics systems | Difficult to understand interface |

Based off the comparison and extra research the most suitable game engine for the project is unity.

**Peer Review Prototype**

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| --- |
| Add ambience instead of music, change font, add banner reminding controls, fix spelling and grammar. |

**User Trial Improvements**

**CREDITS**

01\_Lanes\_Island\_Ambient\_48\_24.wav by tomtenney -- https://freesound.org/s/125224/ -- License: Attribution 4.0